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NZCS Conference 2002 – An Overview

“Crossroads – Making Tough Decisions for Future Generations” was this year’s theme for the NZ Coastal Society Annual Seminar held in October 2002 at Pauanui Beach, Coromandel.

The NZCS Chairperson, Harvey Brookes welcomed over 100 participants who were presented with a keynote address from Dr Andy Short, Director of the Marine Studies Centre and Coastal Studies Unit at the University of Sydney.

The Coromandel Peninsula is facing huge pressures from increasing demands for human use, including competing commercial and recreational users and subdivision, throughout the coastal margins and estuarine environments. The conference provided an opportunity to discuss coastal management and the development of tools for successful long-term management in the face of conflicting pressures. It was fantastic to see a positive meeting of such a diverse range of coastal professionals all keen to learn and explore, network and catch up with each other. Thanks must be given to our sponsors, Environment Waikato, MacCafferri, Tonkin & Taylor, Beca Carter Hollings & Ferner Ltd and CSP Pacific who helped ensure the conference was a great success.

This is the first conference where we have reached the maximum on attendee numbers and have had to turn some people away. We believe this reflects the continually increasing interest in the work of the Coastal Society and in coastal science, engineering and management in general.



Tairua Beach
(Photo: Jim Dahm, Coastline Consultants)

Keynote Address: Australian Approaches to Coastal Management
Dr Andy Short
(University of Sydney)

Andy described coastal management in Australia, which is conducted at three levels - federal, state and local. Whereas the local

government has had long experience in dealing with coastal issues, traditionally in a policy vacuum, state governments only began developing coastal policies and becoming involved in coastal management in the 1970s, while the first federal National Oceans Policy (NOP) was enacted in 1998.

At a federal level the NOP links ocean ecosystems to ecologically sustainable development and promotes strong, diverse and internationally competitive marine industries. The federal government has also encouraged the establishment of marine parks around the Australian coast. Coastal management in Australia is principally the responsibility of the states that are concerned with coastal pollution, coastal protection, provision of ports and harbours, coastal landuse planning and overall economic development. The responsibility is shared in practice with local government.

Andy described the situation in NSW where the NSW Coastal Protection Act (1979) was enacted after the devastating storms and coastal erosion in the mid-1970s. The first NSW Coastal Policy in 1990 was quite narrow, largely responding to large-scale tourist and development pressures. Its revision in 1997 expanded the terms of reference to broader based environmental



Keynote speaker Dr Andy Short presenting to the conference

and social issues, and extended the coastal zone to include estuaries, lakes, lagoon and rivers. The policy addresses issues such as water quality, ocean outfalls, fishery habitats, wetlands, intertidal reserves, development controls (coastal settlements), cultural heritage and climate change. It discourages ribbon development, bans sand mining in national parks, bans canal estates (still permitted in some states), and encourages local community involvement.

Local government is the beachhead of coastal management. There are hundreds of Local Government Areas (LGA's) around the Australian coast and 57 in NSW alone. They range considerably in size, population, coastal environment, climate and hazards, as well as resources and development pressures. In NSW each LGA must have a Coastal Management Committee (also Estuary Management Committee and Catchment Management Committees). All committees have a majority of community members, together with representatives from local government and some state agencies. The committees develop coastal management plans, using guidelines set out in the NSW Coastal Management Manual (presently under revision). The plans must be approved by regulatory authorities and receive 50% state funding. Some LGA's combine to develop regional plans such as the Sydney Harbour Regional Councils and the Northern Rivers Regional Councils.

Andy's parting shot was that he felt that the time had come for coastal management in Australia



NZCS Chairman, Harvey Brookes, and Keynote speaker, Dr Andy Short

because of broad community (voter) support and the fact that management had moved from coast (property) protection to coast (environment) protection. There was a need for coastal management to be adapted to local/state/regional environment & requirements and in places it needs regional integration. He considered that it becomes increasingly compromised at local level, and needs state and federal oversight and funds to address this issue.

By Terry Hume (NIWA)

The Coastal CRC: An Australian Initiative for Bridging the Gaps between Scientists, Decision-Makers and the Community

Tim Smith (Griffith University)

Tim began by providing an overview of Coastal Cooperative Research Centres (or Coastal CRCs) in Australia, the mission of which is to deliver decision-making tools, understanding and knowledge necessary for the effective management and ecosystem health of coastal zones, estuaries and waterways. The research focus of the CRCs are transdisciplinary and integrated with research themes that attempt to integrate research into policy. Tim spoke about his current project - the Citizen Science Toolbox.

Citizen Science aims to provide a strategy for linking scientists, stakeholders and decision-makers. In doing so, Citizen Science promotes an active citizen society and promotes citizen responsibility. Tim suggests looking at the website for more information (see p13 for website address).

By Tracey Grant (Beca)

Review of the New Zealand Coastal Policy Statement

Denise Young (Department of Conservation)

Denise Young, a senior policy analyst with the Department of Conservation, discussed the forthcoming review of the New Zealand Coastal Policy Statement (NZCPS). The current policy was gazetted in 1994 and must be reviewed before 2004. She explained that the Government was currently engaged in the process of selecting a reviewer (or reviewers) and that the formal review would commence by November 2003. Denise doesn't expect a new policy statement to be in place before 2006, given the contested nature of coastal management in New Zealand.

There have been a number of developments since the first NZCPS was prepared, including the demand for more and larger marine farms, increased knowledge of the nature of coastal hazards, increased conflict over public access to the coast, the impact of Treaty of Waitangi claims and settlements, the development of government policy in the area of oceans and biodiversity, and progress in completing the first generation of regional coastal plans. The new NZCPS may need to respond to some or all of these issues.

In the meantime the Department has been

discussing the strengths and weaknesses of the present policy with local authority staff in a series of 12 nationwide meetings. Denise identified a number of issues raised at these meetings, including the role of the NZCPS in the post-plan (regional coastal) environment, the need for better implementation of policies, the role of restricted coastal activities, definition of the coastal environment, and the need for better integration between district and regional councils. Members of the NZ Coastal Society will, no doubt, look forward to the forthcoming review and the opportunity to further improve coastal management in this country.

By Mike Hilton (University of Otago)

Aquaculture Reforms

Owen Cox (MfE)

Owen Cox from MfE outlined the proposed forthcoming aquaculture reforms that are required due to the huge number of applications for space in 2001 and a regulatory regime that prevents Resource Management Act 1991 (RMA) consent authorities considering the impact of aquaculture development on fishing.

A key element of this proposed reform is streamlining of the regulatory processes by a number of methods such as:

- Providing RMA to be the main legislation controlling aquaculture with an amendment of the interface between RMA and fisheries legislation. This will mean that all environmental effects and fisheries matters are considered when decisions are made concerning aquaculture.
- Minister of Conservation having the power to direct regional councils on relevant matters of government policy that need to be taken into account when determining areas / activities to be tendered and when setting tender criteria.
- Retaining a Fisheries Act test to ensure that aquaculture development does not proceed where it has undue adverse effect on either customary or commercial fishing. Voluntary agreements can be reached with affected commercial fisheries rights holders.



Leigh Hopper discussing the Paunaui waterways

- Registration under the Fisheries Act 1996.
- All existing marine farming, leases, licences and permits to be transferred to the new regime.
- Providing for economic development by creation of aquaculture management areas in coastal plans.
- Ensuring cumulative effects of aquaculture on the environment are assessed.
- Providing regional councils with greater powers to manage and control the staged development of aquaculture within AMA's.

Government plans to introduce Aquaculture Reform Bill in late November.

By Ken Murray (DoC)

Aquaculture Variation to the Proposed Auckland Regional Plan: Coastal

Sharlene Pardy (ARC) & Alan Moore (ARC)

Sharlene and Alan presented their work defining Aquaculture Management Areas (AMAs) and developing a policy framework to manage development within AMAs for the Auckland and Waikato regions.

There has been major growth in the marine farming industry over the past five years and the industry is continuing to expand both in the number and scale of marine farming operations and in the species farmed.

In response to industry growth and pressure on coastal open space for aquaculture, central government has announced its intention to amend the RMA in an effort to manage aquaculture in an appropriate and effective manner through the provision of AMAs.

The key principles in the provision of AMAs are:

- The coastal marine area is predominantly public open space.
- Aquaculture is appropriate at the right location and scale.
- The life supporting capacity of ecosystems need to be safeguarded.
- A precautionary approach should be taken where information is lacking.
- Minimise the impacts on public access, navigation and natural character.
- Space allocation should be efficient.
- Certainty of outcome minimises 'transaction costs' to applicants and communities.

The first stage in developing AMAs was the development of a 'constraints map' which identified various uses and values of the coastal marine area, such as navigation, recreation, anchorages, natural character, fishing and cultural heritage. The purpose of the mapping exercise was to identify areas of high value and use that may conflict with aquaculture activities. Such





areas of high constraint are then discounted as potential AMAs. Conversely, areas of low or no constraint will be considered as potential sites for AMAs. Alan noted that the accuracy of the constraints map was only as good as the information received but that it gave a broad indication of areas of low constraint to be assessed in the next stage of AMA development.

The use of defined AMAs will require an allocation method to be developed. The ARC is undertaking consultation with MfE and Ministry for Conservation to determine an appropriate coastal tendering process to be employed. The allocation mechanism will then be incorporated into a policy framework for inclusion in the variation to proposed Regional Plan: Coastal.

By Matt Paterson (ACC)

Planning and Precaution: Linking Policy and Science in the Management of Marine Farming

Robin Britton (Consultant), Rosalind Wilton (EW) & Dr Stephanie Turner (EW)

Environment Waikato followed on from Auckland Regional Council (ARC) to explain how a Marine Farming Variation to the Waikato Regional Coastal Plan identifies an area at Wilson's Bay in the Firth of Thames as a Marine Farming zone (a.k.a. Aquaculture Management Area - AMA). Robin Britton stressed that these decisions often need to be made with limited information, so an approach that is precautionary but responsive to increased knowledge is required.

Policy was developed that enabled science to inform the management of marine farming through an iterative and adaptive process. Robin explained that Environment Waikato has required that marine farming development in the Wilson's Bay be staged, with monitoring results from the first stage of development indicating whether the subsequent stage can progress.

Stephanie Turner joined Robin to explain the wide range of physical and biological monitoring required as part of consent conditions of the marine farms at Wilson's Bay. Stephanie also outlined current work towards establishing trigger points (or performance criteria) for Wilson's Bay,



Hugh Keane from Environment Waikato discussing the proposed Taiura Marina

as well as a joint project with ARC and the industry to assess the sustainability of shellfish operations in the Firth of Thames.

This talk provided a very interesting insight into the practical implementation of AMAs, and the benefits of closely linking science with policy and decision-making.

By Bronwen Gibberd (EW)

Estuaries – Management Challenges

Dr Stephanie Turner (EW)

Stephanie gave the conference a brief overview of what estuaries are and the type of estuary management problems we are facing. Primary problems for estuary management include land clearance (especially forestry), agriculture, infilling and reclamation, channel dredging, marine farming, sewage works and potential effects from sea level rise. Changes that have been documented include rising rates of sediment infilling and the rate of mangrove growth, declining numbers of sea grass beds and the loss in the number of shellfish.

Key management issues include a need to take an integrated management approach, spatial continuity to include land catchments through estuaries to the open ocean. Another key issue for management is the lack of knowledge of cumulative effects, these have not been quantified or critically analysed yet.

Environment Waikato has a number of information needs for which research has begun. These include long term monitoring programmes, specific field studies or case studies, conceptual and predictive models and social, cultural and economic (such as cost of loss of estuaries) values.

It is important that scientific information must be made available and useable by the decision making process.

Stephanie concluding by saying that the integrity of estuaries must not be unduly compromised and the management of these special places requires a proactive integrated approach.

By Lucy Brake (Beca)

Studies of Sand Storage and Movement in the Tairua-Pauanui Embayment

Dr Terry Hume (NIWA)

Terry provided an update of research that NIWA has undertaken into the coastal geomorphic and geological processes occurring in the vicinity of the location of the NZCS conference - Pauanui and Tairua. Any assessment needs to understand and quantify the sand in storage, the movement of sand, the features and processes that act to control movement, the sources of sediment, and rates of loss due to erosion and movement in and out of the system. The approach taken by NIWA was to, in effect, "pull the system apart", and then to reconstruct it by way of models. The study broke the sand system into three subcomponents



Jim Dahm discussing the finer points of beach care at Tairua

– the offshore, the tidal deltas (ebb and flood) and the barriers (Pauanui and Tairua). Wide-ranging investigations included sediments, side-scan sonar mapping, seismic surveys of the seafloor, ground penetrating radar of the barriers' cores, current metering, instrumented tripod developments on the seabed, sediment sampling, Camera and numerical modelling. As part of this suite of measurements, the study undertook repeat surveys of bed-forms and sediment facies at offshore locations. Rather surprisingly, this found remarkably persistent bed-form features in 15 - 20 m depth, despite significant storm events. Sand transport was predicted by analysing the characteristics of seabed ripples, levels of sand re-suspension, as well as the effect of non-uniform spatially varying roughness. The ability of Camera and the digital rectification of oblique images were also described.

By Harvey Brookes (ARC)

Coastal Hazards and Development Setback Recommendations on the Coromandel Peninsula

Bronwen Gibberd (EW) & Peter Wishart (TCDC)

Bronwen and Peter presented an excellent paper on a topic of relevance to many local authorities as they face up to increasing development pressures. They told us that, on the Coromandel Peninsula, over 75% of all sandy beaches are now developed and the close proximity of this development to the sea, and the consequential damage to the natural dune system, has resulted in widespread coastal hazard problems.

Development setbacks have been in place on parts of the Coromandel Peninsula since the early 1980s. The use of setbacks as a planning instrument has recently been reviewed in light of considerably improved knowledge of coastal behaviour. Two types of beaches have been identified: dune barrier beach systems, usually enclosing estuaries, and pocket beach systems that generally occur in small embayments on steep rocky coasts.

The new setback recommendations are intended to ensure that hazard risk is avoided or mitigated as far as possible while maintaining some natural buffer zone. In developed areas, the setback distances are based largely on hazard risk whereas

in undeveloped areas a much wider zone (100m) has been recommended to make allowance for natural character and amenity values.

On developed coastlines, two setback zones have been recommended with distances appropriate to the two types of beaches. The Primary Development Setback (PDS) is intended to provide for dynamic shoreline change and the Secondary Development Setback (SDS) includes an allowance for aggravation of existing coastal hazards likely to be driven by such matters as projected sea level rise over the next 100 years.

The concept of a PDS and a SDS is sound and, although there may be room for debate as to how the distances are defined, other councils could well consider adopting the same terminology, in an effort towards developing more consistent coastal management practices around the New Zealand coastline

By John Lumsden (Consultant)

Are we getting the Coast we Deserve? Waikato Region Coastal Values Surveys

Jill Thompson (Consultant)

Approximately 75% of the beaches on the Coromandel Peninsula are affected by developments, reflecting that coastal beaches are the most popular destination for leisure activities. National and international demand for access to beaches is growing, particularly to clean, undeveloped beaches. Of the nearly 1200 responses to an extensive, region-wide survey on beach use and management, 80.2% chose the "natural beach" over "rip-rap", "grass verge" and "city" beaches popularly visited. A further 17.5% preferred a grass-verged beach. Most respondents considered that retention of some undeveloped beaches was Very Important, while least valued was protection of private property, even at the expense of losing the beach. Coastal property owners tended to want to protect their asset and regarded that their views should rate more highly than non-coastal property owners, whereas non-coastal property owners saw the beach as a community asset and felt that if an asset needed protecting, it probably should not have been built there in the first place.

Walking/running (93%), swimming (83%) and sunbathing/relaxing (77%) were the most popular activities for the beach, while on average \$11.57 was spent per person per day at the beach. Initial survey work clearly indicates that the more natural the beach, the higher its value and importance in their lives.

By Eric Verstappen (NDC)

Environmental Economics: What's it got to do with the Coast?

Matt Hickman (EW)

In his presentation Matt explored the theory, practice, and challenge of environmental economics, in particular deriving economic values

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WRC Tsunami Report



In July 2002 a report was released from the Wellington Regional Council (WRC) titled: 'Options for Managing Risks from Tsunami in the Wellington Region' produced by consultants Tonkin & Taylor. The report builds on our current level of technical knowledge (provided to WRC by GeoEnvironmental consultant James Goff in his Tsunami Scoping Report) but also acknowledges that our level of knowledge of the science of tsunami will continue to grow.

The main aims of the project were to identify and assess options for managing risks from tsunami to the Wellington Region, and to recommend a management approach for each distinct section of the coastline or community. The key interest was to protect human life through good planning, building and infrastructure design and placement, and assisting recovery of the community through management of lifelines/infrastructure.

The report characterises the Wellington region's coast into seven classes of landuse or development titled 'Elements at Risk' (see Figure 1 - Please note Figure 1 can be viewed in colour on the website - www.cae.canterbury.ac.nz/nzcs//NZCS21.pdf).

Seven management options were then devised, considered from principles from the National Tsunami Hazard Mitigation Programme in the US (see Table 1). In summary, seven classes of landuse or development for the Wellington Region were devised (see Figure 1), as well as seven ways that tsunami risk can be managed (see Table 1).

To assist the territorial authorities, a number of management options were discussed for each of the 'Elements at Risk' (Figure 1) as being directly relevant to that section of landuse or development. For example, for Class G (Coastal Infrastructure) management options 3,4,5 and 7 are relevant.

This report is a new style of publication that the WRC is exploring. It seeks to build on the existing hazard knowledge that the WRC has, and attempts to provide options and offer guidelines for the Territorial Authorities to manage the hazard in their area.

A copy of this report and the earlier Scoping Study can be found in the publications page of the WRC website: www.wrc.govt.nz, or follow these direct links:

www.wrc.govt.nz/pub/view_doc.cfm?id=468
scoping study and

www.wrc.govt.nz/pub/view_doc.cfm?id=527
options study

If you have any queries, please contact Rylee Pettersson, Hazard Analyst at the Wellington Regional Council on 04) 385 5708, or email at rylee.pettersson@wrc.govt.nz.

Option 1	Identification of risk: hazard, vulnerability and exposure
Option 2	Avoid new development in tsunami hazard areas
Option 3	Control the location and nature of new development
Option 4	Regulate the design and construction of buildings in tsunami hazard areas
Option 5	Protect existing natural and physical resources
Option 6	Planning and design of key infrastructure and critical facilities
Option 7	Emergency response plans

Table 1: Management Options to minimise the risk of tsunami on the social and physical environment (Source: Tonkin & Taylor)

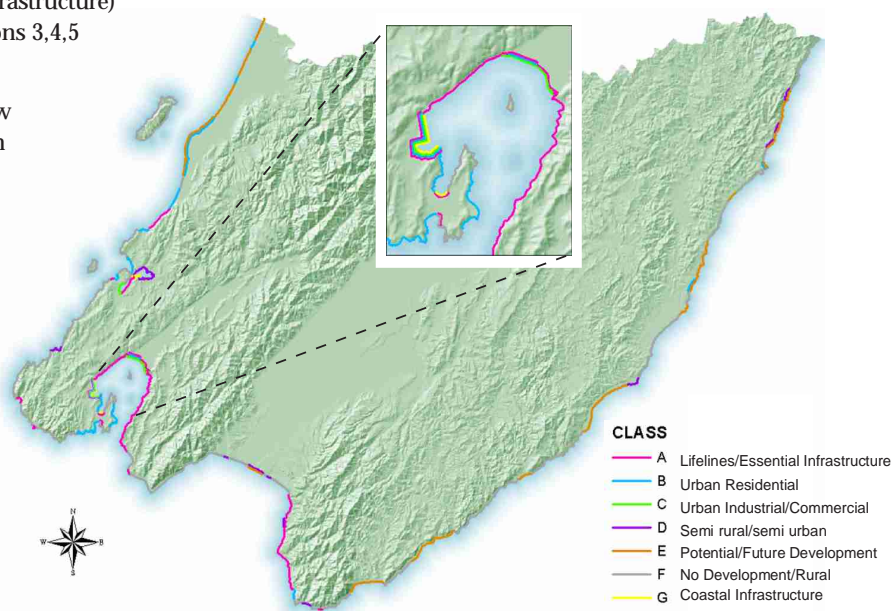


Figure 1: Characterisation of regional coast according to classes of elements at risk (Source: Tonkin & Taylor 2002)

Wellington Harbour Case Study – An Update

Coastal News 20 detailed some of the work Wellington Regional Council (WRC) were planning to undertake later this year. This article is an update on the progress of that work.

WRC have a webpage on the design desk and this should be up and running shortly. This will be an important point of contact for the study, enabling people and community groups to keep up to date with the latest events.

WRC have an information database underway. The data will be available on the webpage in the coming months (see above). The database (a metadata base) will hold most popular marine and coastal publications, technical papers and other reference material for the case study area. A search engine will be built and accessed via the website. This will allow people interested in Wellington harbour and other parts of Cook Strait access to a list of publications. The database will provide all current details about a publication, such as where to source it, copyright controls and who to contact about the publication.

Another information project WRC are also getting underway with is GIS layers of the case study area. The layers will be built from existing information and again accessed via the website above. Some preliminary layers are bathymetry, resource management boundaries, shipping lanes, fishing areas, areas of significant conservation value, sea surface temperatures and so on.

WRC are also progressing with community participation in this project. A series of talks has been planned at Te Papa, the first was held on 14

November 2002. The idea is to involve the community with the marine environment for the study area. The talks will cover many themes, the first was a series of small talks and discussions on the biophysical aspects of the harbour and strait, what community groups are involved in, what education possibilities exist, and an interactive session about how the community can help plan events in the future.

WRC also have moved along with understanding of marine legislation and the decision-making paths contained within this legislation. More work is required in this area, and some exciting projects are planned. Keep a look out for the next update in *Coastal News 22*.

If you want any more information please call Paul Denton on 04 384 5708 or email: paul.denton@wrc.govt.nz



Castle Point, Wellington

A New Zealand Coastal Book – at last

There has long been a need for an earth science based book about the New Zealand coast. However, while there has long been a need, to date a book has not been forthcoming. So it is pleasing to note that a book is finally at the presses. It is called "The New Zealand Coast: Te Tai O Aotearoa" and is edited by Helen Rouse (West Coast Regional Council), James Goff (GeoEnvironmental Consultants) and Scott Nichol (University of Auckland). Chapter contributions have come from 22 authors, representing a cross section of Universities, Regional Authorities and Crown Research Institutes.

NZCS has contributed to the book by way of contribution to the publication costs and through Coastal Society members writing chapters.

The editors began work on the book way back in August 1997 and it is a tribute to the enthusiasm and patience of the contributing authors that this book is now emerging as a reality. It is hoped that the book can fulfill its potential as a tool to assist students and workers alike with their interest in, and responsibilities to, the New Zealand coastline.

Although the work contained in the book is by no means exhaustive, the chapters provide a compilation representative of coastal research in Aotearoa/New Zealand. The chapter topics include regional tectonics, physical oceanography, tsunami and storm surge hazard, shelf sand systems, high energy beaches, gravel and mixed sand and gravel beaches, sandy barriers and coastal dunes, estuaries and tidal inlets, coastal wetlands, humans on the coast, and contaminants on the coast.

The book is a key milestone and we look forward to future editions of this, and similar volumes, to provide an ongoing commentary of our New Zealand coast.

The book launch is planned for early in the new year, when copies may be purchased at an affordable price from Whitireia Publishing in Auckland. Full details on how to buy a copy of the *New Zealand Coast* will be published in the next *Coastal News*.

For further information please contact Lucy Brake, Editor *Coastal News*, lbrake@beca.co.nz

**Coastal
News**





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for the coast in order to ensure that such areas are fully taken account of in decision-making.

With the focus now on sustainability, decision-making needs to balance social, environmental and economic considerations. Not placing a monetary value on natural coastal resources has effectively excluded these from consideration in the policy decision-making process.

A range of economic valuation techniques has been developed to assist in imputing the monetary value attached to environmental goods and services. The general aim of these is to determine the trade-offs (in monetary terms) that individuals would be prepared to make.

An example given was how much you would be willing to pay in your rates for a natural, undeveloped beach against a developed beach with good access and facilities. A monetary value is then derived. This monetary value can then be used with social and economic considerations.

Like most perception-based values there are difficulties in applying such techniques based around the questions asked and how the values are derived. However, even if agreement cannot be reached in terms of actual monetary values, such valuations can be extremely useful in terms of understanding the relative importance of issues.

In order to protect the unique character of New Zealand's coastline, there needs to be a definite change in thinking towards how our society values our coastline and how such values can be equitably integrated into decision making, to ensure their ongoing protection and existence.

Matt concluded that:

- Internationally there has been a 'bridging of the gap between conventional economics and environmental economics!
- Although not common in New Zealand, especially for the coastal area, there is growing interest across the industry for the potential usefulness of environmental valuations.
- The challenge is to encourage research in this area as well as the acceptability and usability of environmental monetary valuation in decision-making.

By Matt Paterson (ACC)

The Impact of Exotic Grasses on the Development of Active Dune Systems in New Zealand and Southeast Australia

Dr Mike Hilton (University of Otago)

Mike Hilton presented an interesting paper about the impact of exotic plants on active dune systems in both New Zealand and Australia and their ability to completely dominate the natural vegetation and change the functioning of sand dune systems.

Using Mason's Bay Stewart Island sand dunes as



Tairua Harbour

an example, Mike illustrated the rapid invasion (1978 to 1999) of the exotic marram grass over dunes containing scattered populations of pingao and sand tussocks. This marram invasion resulted in the development of a major fore dune complex where none existed previously. In 1999, the Department of Conservation aerially sprayed the marram with gallant with backpack follow up. Native pingao is now re-establishing although the foredune is still bonded together by dead marram rhizomes.

Mike also illustrated changes in the Manawatu dune system following introduction of marram. This system has had several phases of active dune (6000, 3500, 1000 years BP). With the marram invasion habitats a number of species dependent on dune mobility were lost.

A chilling example illustrated was the spread of Sea spurge (*Euphorbia paralis*) a perennial herb native to Southern Europe around Southern Australia and Tasmania. Its seeds can remain viable in seawater for seven years and can be transported in ballast water. Again the dune communities are totally dominated by this plant.

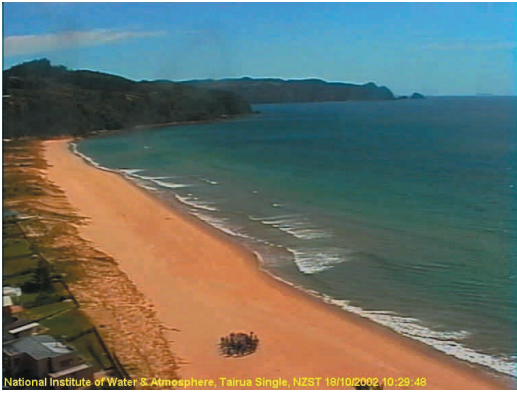
Overall, there is great potential for some new exotic species to colonise NZ's dune systems. At potential risk are dunes that are down current from Australia that presently have few exotic plants and retain their naturally functioning, such as in Fiordland. Exotic invaders can also totally dominate indigenous plant communities and change dune functioning. But the good news is that they can be eradicated and the indigenous communities can re-establish.

By Ken Murray (DoC)

Cheese Tasting and Dinner

The evening started off with a delectable selection of cheeses and a talk from the cheese makers. This was followed by a luscious dinner of seafood and other goodies (you can tell it's a piscatorial writing this), before everyone settled in for the main event of the evening – pudding. And I must pause briefly here to rave about the richness of the chocolate cake and the general deliciousness of the cheesecake thingy (I had three helpings!).

Well lubricated with wine and entertaining



National Institute of Water & Atmosphere, Tairua Single, NZST 19/10/2002 10:29:48

Tairua webcam - spot the NZCS Conference group!

conversation, the evening then turned to more loquacious activities. The Improvisers (who some remembered from the Auckland Conference of 2000) gave us moving rendition of “Bronwen and Tom in the ruck” accompanied by the dulcet tones of Craig Davis (not the last time we would hear his singing voice that evening). We also heard an entertaining tale of Crusty Crackles Ken generating a current in novel ways to reach the blue sands of Invercargill. Control of the evening was taken out of Harvey’s hands, but my personal favourite was a tribute to the newly married Susy and husband Clarke, the Superman in her life.

As the evening wore on, the crowds thinned and the serious merrymaking got underway. But as they say, what goes on at the conference, stays at the conference (I went to bed early and no-one’s admitting to anything) so just let me conclude by saying you had to be there!

By Jo Fagan (WRC)

Whitianga Field Trip

Day two of the Seminar was largely devoted to a tour of local coastal hot spots, starting with the Pauanui “Waterways” development. Lee Hopper gave a very informative account of the environmental issues associated with this canal-housing style development. Regardless of their politics, most delegates were impressed by the amenities and high water quality standards in the canals.

Delegates then enjoyed morning tea at the Upper Deck on the former Auckland ferry near the proposed site of the Tairua marina. Refreshed, the party moved to Tairua Beach, where Terry Hume described NIWA’s Cam-era project (see photo above) and Jim Dahm discussed local beach management. Delegates then enjoyed the twists and turns and stunning scenery of the Coromandel ranges on the journey to Whitianga.

The salt marsh and mangrove habitats of the Whitianga estuary reminded those of us now living in the south of our northern pnuemataphors (i.e. roots). We slowed as we entered the town to view the Whitianga Waterways development, which is similar in style to the Pauanui project. The coastal hazard issues and “temporary” engineering

solutions at Buffalo and Ohuka Beaches provided fuel for an absorbing discussion on the foreshore.

Thereafter, people lazed on the foreshore and enjoyed their packed lunch. A great day out - thanks to Bronwen and Co. and all the speakers. Based on the sites visited coastal management will continue to be relevant for many years hence.

By Mike Hilton (University of Otago)

Wharekawa/Whangamata Field Trip

The importance of the Wharekawa Estuary for bird feeding and breeding was illustrated by the presence of dotterels as we walked over the sand flats. Although fairly pristine in terms of lack of development, the catchment is made up of 50-60% exotic forestry, and when this is harvested large amounts of sediment flood the estuary.

This increased sedimentation of the estuary has meant a rapid increase in mangroves, although it is unknown to what extent increased nutrients are also contributing.

Some local people seem very concerned about the spread of the mangroves, and the associated loss of recreational opportunities, and are now removing new mangroves on a weekly basis.

Environment Waikato has undertaken a sedimentation study in the Wharekawa and Whangamata estuaries, as both have a small tidal prism and are becoming very infilled. Both have concerned locals removing new mangroves. The Council is now trying to incorporate the monitoring of estuarine sedimentation and biological communities into the consent conditions for forestry companies clearing production forestry.

Whangamata is an incredibly popular summer beach resort with numbers swelling to about 50,000 during the summer holidays. The Whangamata Beachcare group started in 1994, and despite a “healthy scepticism” by some in the local community, have successfully re-vegetated foredunes and provided access ways to direct pedestrian traffic onto the beach, and to protect the revegetation plantings.

By Jo Fagan (WRC)



Whitianga field trip



Coastal Hazards — Tauranga District

Further to an article presented on page 14 of *Coastal News 19* about coastal hazards in the Tauranga District area, this is a further update.

At the end of the last article it was noted that the technical evidence relating to the Environment Court appeal had been completed and that the Court had retired to consider its decision with respect to the evidence presented.

In August 2002 the Court delivered its decision. The Court, with one exception, upheld the Council's decision by confirming:

- the positions and validity of the Extreme, High and Moderate Risk Zones.
- the lack of certainty as to the future climate change and how such change will affect the drivers that lead to shoreline movement.
- the sediment system for the area is governed by cross shore transport mechanisms.
- the Bruun Rule was an appropriate method for assessing the possible effects of sea level rise for the area.
- that Tauranga District Council had acted appropriately in pursuing the course of

investigation and analysis with regard to coastal hazard risk.

The Court however found that in its opinion the safety buffer zone was overly conservative and should be deleted.

The Court directed that Tauranga District Council file for its consideration a memorandum with the Court with respect to proposed amendments to the provisions in its Proposed District Plan relative to coastal hazard management.

Since the decision was delivered both the Tauranga District Council and the appellant have appealed the decision to the High Court of New Zealand. The basis of the appellants appeal is that the Environment Court could not have reasonably reached the decision it has on the evidence presented while the Council's appeal relates to the Court's decision to delete the safety buffer zone.

Further news of the coastal hazard issues for Tauranga District will be supplied in the next issue of *Coastal News*.

For further information, please contact the Editor, *Coastal News*.

Coastal News



A Word from the Chair

In a sense this edition of *Coastal News* brings the NZCS year to a close, and begins what I hope will be another exciting and positive year for the society. This year's conference at Pauanui was a tremendous success by any measure, and was a fitting way to conclude the past 12 months. You can read more detail on the achievements of the year in my Annual Report.

The one additional comment that needs to be

added to that is my own sincere and personal thanks to the 2001/02 Management Committee, and also to Bronwen Gibberd and Matt Patterson for the huge amount of work that went into organising the 2002 conference.

Best wishes

Harvey Brookes, Chairman, NZCS
e-mail: Harvey.Brookes@arc.govt.nz

NZCS Regional Co-ordinators

There are a number of Regional Co-ordinators around the country who may be able to help you if you have any queries about NZCS going on's in your local area — or if you are just interested in getting involved in the NZCS on a local level.

North Island		
Northland	Rick Stolwerk	stolwerk@xtra.co.nz
Auckland	Matt Paterson	paterson@akcity.govt.nz
Waikato/BOP	Bronwen Riddle	Bronwen.Riddle@ew.govt.nz
Hawkes Bay	VACANT	
Taranaki	Peter Atkinson	dwk.newplymouth@duffillwatts.com
Manawatu/Wanganui	Lachie Grant	lachie.grant@horizons.govt.nz
Wellington	VACANT	
South Island		
Upper South Island	Eric Verstappen	eric@tdc.govt.nz
Canterbury	Justin Cope	justin.cope@ecan.govt.nz
	Brodie Young	brodie.young@ecan.govt.nz
Southland/Otago	Mike Hilton	mjh@geography.otago.ac.nz

For further information, please feel free to contact the NZCS Regional Co-ordinator Jo Fagan (jo.Fagan@wrc.govt.nz)

Annual Report of the New Zealand Coastal Society Inc.

For the Year October 2001 – October 2002

It is my great pleasure to report to you on the activities and achievements of the New Zealand Coastal Society (NZCS) over the past 12 months. As chairman, it has been my pleasure to work with a very capable and enthusiastic committee, which has helped to lead a year of achievement and change for the society.

From a personal perspective, that change started at this same conference 12 months ago, when as a society, we decided that a change in direction was needed. Some of you may recall my call for a change from a culture of transactional thinking to one of transformation and change. That change was about becoming an organisation with a greater public profile, an organisation recognised as a leader in coastal issues throughout New Zealand, and a provider of excellent services and products to its members and the wider community. To this end we have developed a strategic plan which has helped us to focus on the key outcomes and deliverables which we wanted to achieve in our term as committee. My report focuses on our achievements relative to that plan.

The changes we have made have necessarily focused on the core activities of the committee. Outside of the annual conference, the society exists principally through the activity of its committee. We have reduced the size of the committee to 10, and ensured that each committee member has defined roles and outcomes that they take ownership of while in service to the society. We have reduced the number of committee meetings, and focused on fewer, more focused and more results oriented committee gatherings. I am pleased to say that this has led to good outcomes, quicker resolution of issues and generally better service to our members. I would also dare to suggest that we have each shared our own ideas on leadership, coastal management and even a little philosophy, which some of you might have noticed by way of the occasional passage of coastal wisdom in the Coastal News.

More specifically, the stand-out achievements for me and the committee in the past year have included:

1. The continued evolution and increased readership of our flagship publication "Coastal News". CN is a high quality publication which represents many of the major coastal interests in New Zealand, and is published to a regular schedule. CN fills a well-defined niche in between technical journals and general media publications, and does it in a way that is readable to a very wide audience. It really is our flagship product, and one of which I think the whole society can be very proud of. I'd like to especially mention several people who have led this publication to its current high standard.
 - Terry Hume (immediate past Editor) has somehow managed to squeeze producing CN in between his other many commitments. Terry's role has been pivotal in seeing CN reach its current high standard. Terry has now stood down from the Editor's role to focus on next year's Coasts and Ports Conference.
 - Lucy Brake (Editor) has been Associate Editor of CN for several years, and has now stepped up to the Editor's role. Lucy has been the backbone of CN in terms of searching out articles, web-link and giving people a gentle nudge to submit articles on time. I'm sure under Lucy's leadership, CN will grow even further. Mike Hilton has now stepped into the Associate Editor's role, which is sure to bring a southern flavour to future editions.
2. The NZCS web-site has continued to evolve, and is now more actively managed to ensure it is up to date, topical and interesting to readers world-wide. In the past year we have revised the domain name for the site, updated content and revamped the overall structure of the site. John Lumsden has been instrumental in this, working alongside Charles Hendtlass from CAE to ensure we have a worthwhile and attractive portal onto the world-wide-web.
3. Membership has been a key focus for the society since last October. Our Strategic Plan set a target of increasing our membership base by 10% by February 2003. Since that time we have identified around 35 people and organisations who were offered complementary membership by the NZCS at the 2000 seminar, but were never given the opportunity to take up that offer. We have now contacted most of these people, and almost all of them have accepted our offer of membership. While we are not collecting fees from these people in their first year, we feel certain that a good percentage of them will wish to stay in the society, thus growing our membership and financial base in the future. I'd like to thank Jo Fagan, Paul Baunton and Ken Murray for all their work in this complex and difficult area over the past 12 months.
4. We have reached out to tertiary students through our student travel scholarship programme. The society now offers an annual student scholarship to allow students to travel to the NZCS seminar. We are delighted to welcome Donna Woodley from the University of Otago, the winner of this year's student scholarship. My thanks to Mike Hilton for his work in establishing the system which supports this new process.

Coastal
News





5. We are now stronger in the regions thanks to the identification of regional sub-committee representatives. These people acts as catalysts for the discussion of coastal issues and the convening of meetings and gatherings from time to time. Jo Fagan has spent a considerable amount of time creating this important network.
6. I cannot understate the effort required to hold an event such as the NZCS Annual Conference. Along with CN, the seminar is the tangible evidence of the NZCS, so its success is a major factor in a successful year for the society. It requires commitment, skilled planning plus some dogged determination to sort out speakers, venues and sponsors, let alone attract participants from all over New Zealand and even beyond. Mat Patterson and Bronwen Gibberd have poured a great deal of time and passion into the 2002 Conference and they receive my heartfelt thanks. I would also like to mention the tremendous work of Eric Verstappen who looked after the 2001 seminar in Nelson, which was one of the most successful seminar/conferences the society has held.
7. Our last area of focus is on the satisfaction of our members with the quality of services provided. We have started to develop a marketing strategy to ensure we are reaching our target audiences, and are also critically concerned with your views on our performance.

I would like to also make mention of our secretary, Paul Baunton and our treasurer Eric Verstappen who have both found time to look after the correspondence and finances of the society over the past 12 months. Both are thankless tasks and I appreciate their effort and commitment.

Our financial position remains very strong. The society has a total of \$87,000 in available funds, of which \$80,000 is currently invested. The treasurer's report gives a detailed breakdown of our financial position (a summary is presented on page 14 of this issue). As a committee, we have been very mindful of the need to maintain the Society's strong financial position, against the

Test your Coastal Knowledge



Where is this coastal settlement (photographed in the 1960s)?

Answer on page 19

need to make wise investments for the good of our members and coastal management in New Zealand. Our investments in a showcase book on the New Zealand Coast and our student scholarships are examples of this. We are currently investigating options for investment of our funds in key coastal guidelines and publications and further upgrading of our website. However, we are mindful that the NZCS is in part underwriting the 2003 Coasts and Ports Conference, and while we expect a very successful conference, we must retain sufficient equity to cover any unforeseen events.

With our retrospective assessment complete, I'd like to look forward to the year ahead. The society and the committee you elected at the conference will continue to grow as a central player in coastal and ocean management matters in New Zealand. Our regional subcommittees will strengthen and provide a solid foundation for the sharing of ideas and knowledge at a regional level. You, our members, will continue to receive a suite of high quality products via *Coastal News* and our web site. The society's profile will leap ahead as it co-leads a highly successful Coasts and Ports Conference from September 9-12 2003 in Auckland, and we will see an even more successful 2003 annual NZCS conference as our new members swell the conference attendees. The society will continue to invest in services and products that benefit its members and the wider coastal community. And of course the net result of our efforts, and all of those involved in matters coastal, will be that our world class coastal and ocean areas are, even if in a small way, better managed, better protected and better off for future generations.

Thank you for your support, and best wishes for the year ahead.

*Harvey Brookes, Chairman, NZCS.
e-mail: hbrookes@arc.govt.nz*

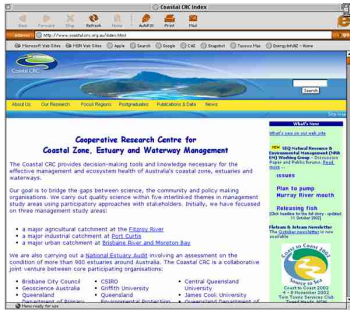
NZCS Mission Statement

"The New Zealand Coastal Society was inaugurated in 1992 to promote and advance sustainable management of the coastal environment.

The Society provides a forum for those with a genuine interest in the coastal zone to communicate amongst themselves and with the public. The Society currently incorporates about 300 members. Members represent the wide range of coastal science, engineering and planning disciplines, and are employed in the engineering industry, local, regional and central government, research centres and universities."

Applications for membership should be sent to the Secretary (*see address on p 18*)

What's Hot on the WWW



www.coastal.crc.org.au/index.html

It might be timely to check out the (Australian) Coastal CRC (Cooperative Research Centre for Coastal Zone, Estuary and Waterway Management) site, in light of Tim Smith's presentation at the NZCS Pauanui Seminar. The goal of the CRC "is to bridge the gaps between science, the community and policy making organisations". The Coastal CRC conducts research in five interlinked themes: decision frameworks, citizen science and education, planning and restoration, ecosystem processes, and assessment and monitoring. They are also carrying out a National Estuary Audit involving an assessment on the condition of more than 900 estuaries around Australia.

Coastal
News



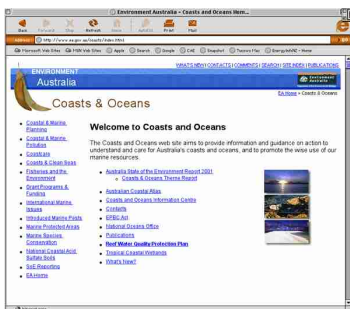
www.ntf.flinders.edu.au/

The National Tidal Facility of Flinders University (Adelaide, South Australia) undertakes research in various areas of marine science, including tidal analysis, forecasting sea levels for maritime services, sea-level monitoring for climate change, tsunami predictions, marine hazard predictions and current monitoring for climate change and shipping. The site provides access to sea-level and other data recorded at SEAFRAME (Sea level Fine Resolution Acoustic Measuring Equipment) stations. It also has some fascinating animations of recent tsunamis. The website provides access to the Southern Ocean Sea Level Centre (SOSLC), which provides a communication forum, data bank and information service for all groups with an interest in sea level work in the Southern Ocean.



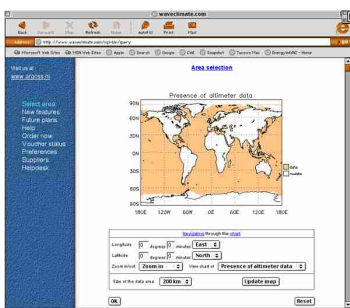
www.johannesburgsummit.org/

This site reports on the World Summit on Sustainable Development held in Johannesburg from the 26 August to the 4 September 2002. This site contains a wealth of information and links and, of particular interest, a number of key outcomes relate to the coastal environment. The Summit resolved to encourage the application by 2010 of the ecosystem approach for the sustainable development of the oceans; establish by 2004 a regular process under the United Nations for global reporting and assessment of the state of the marine environment.



www.ea.gov.au/coasts/index.html

The Coasts and Oceans section of Environment Australia supports an excellent web site with links to various programs, including Coastcare, Coasts and Clean Seas, Fisheries, Marine Pests and Marine Protected Areas. Some of the recent developments in coastal and resource management in New Zealand have also occurred in Australia, such as state of the environment reporting. The Australia State of the Environment 2001 Report echo's many of the themes in Andy Short's keynote address to the NZCS Annual Seminar in Pauanui. It is interesting to see that the Australian Government is actively supporting the dissemination of knowledge relating to coastal ecosystems, through the Coasts and Oceans Information Centre.



www.waveclimate.com

This is a commercial site run by ARGUSS, offering online wave and wind climate (at any site, in any season). New features are automatic cross-calibration of wave height data from different sensors, simplified selection of the area of interest, and the option to keep downloaded climate information on the screen.

News from the Regions

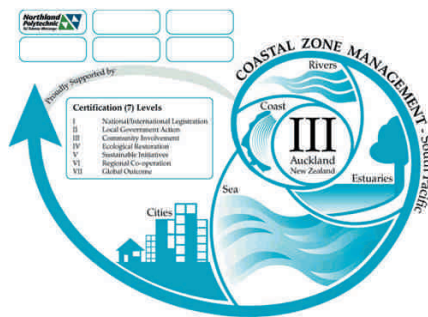
Northland Coast

Firstly, thanks to the NZCS Management Committee for an excellent conference. A special venue, great beaches, interesting papers and good company. Looking forward to next year's conference.

At our annual Bream Bay Beach Clean Up Day in September, we had over 600 students, parents, local businesses and members of the community involved on the day. We cleaned up over 22 kilometres of coastline. A special thanks to the Waipu and Marsden Lions who cooked the 1000 sausages that disappeared rather quickly.

Recently we were fortunate to host Tim Smith from the Coastal Co-operative Research Centre (CRC), at Griffith University Brisbane. Tim spoke at the NIWA Aquaculture Park in Ruakaka, on the formation of the CRC and its role in education and 'bridging the gaps' in Australian coastal research. Tim also presented a paper at the recent NZCS Conference.

An idea for the future: the logo below is being designed in consultation with staff and students at Northland Polytechnic, participating overseas universities and Bream Bay College. The final draft will be produced as a board game and presented at the Coastal Zone Asia Pacific Conference in Brisbane in 2004.



This draft of the logo is based on the shape of the distinctive nautilus shell. The overriding theme is the integrated management of coastal resources. Individual locations are rated internationally, according to the certification levels listed below. Please feel free to contact me with any ideas or suggestions you may have.

*Rick Stolwerk, Faculty of Health and Science,
Northland Polytechnic
Email: stolwerk@xtra.co.nz*

Waikato/Bay of Plenty

The organisation of the NZCS 2002 Conference has really taken up most of the time of the Regional Co-ordinators for the Waikato/Bay of Plenty. The NZCS Regional members were invited to join with the NZ Planning Institute BOP Regional members for a presentation on Aquaculture by Environment BOP and Whakatane District Council held in early

November. This was well-attended and provided a continuation of one of the themes presented at the NZCS Conference in Pauanui.

*Bronwen Gibberd, Environment Waikato
e-mail: bronwen.gibbered@ew.govt.nz*

Auckland Region

To date I have been rather inactive in organising activities for the Auckland Region. However, Andrew Benson and Richard Reinen-Hamill have kindly offered their assistance in getting a programme of regular seminars going. So if you are doing anything of interest that you wish to share, or have some issue worthy of debate, let me know.

*Matthew Patterson, Auckland City Council
e-mail: matthew.paterson@aucklandcity.govt.nz*

NZCS Reports

NZCS Accounts - Brief Summary for 12 months to 30 Sept 2002

The opening balance at 1 Oct 2001 stood at \$68,988. Over the 11 months to 31 August, the NZCS recorded a net operating surplus of \$5,263 and had introduced funds of \$10,706, resulting in a Total Accumulated Funds balance of \$84,957. A sum of \$80,000 is invested in a Westpac Trust short term deposit account, and as of 30 Sept 02, the IPENZ Current Account registered a balance of \$1867.89. The Total Accumulated Fund balance to 1st October 2002 is \$81,867.89.

NZCS Website

Visitor numbers to the site are relatively steady, with an average of 160 unique visitors per month over the period July - September 2002 (unique visitors excludes return visits in the same month). Approximately 70% of visitors are from within New Zealand.

The most popular files on the site are the pdf versions of *Coastal News*, followed by the Upcoming Events section. It is pleasing to note that the on-line joining form has resulted in 15 applications for membership since it went 'live'.

Major updates to the site coincide with the publication of *Coastal News*, and minor changes are made regularly to keep the site up to date. Along with the next major update, it is also intended to submit the site to a wider variety of search engines to boost visitor numbers.

Address: www.coastalsociety.org.nz



NZCS Student Scholarship Winner 2002

Donna Woodley of Otago University was awarded the 2002 NZ Coastal Society Student Scholarship. The Scholarship, which has a value of around \$500, plus conference registration, supports student attendance at the Society's annual seminar. Donna is engaged in MSc thesis research in the Department of Geography. She is studying foredunes at sites where marram grass has been eradicated (using herbicide). Her work has revealed that such foredunes erode quite slowly after death of the marram grass cover. Marram rhizome and "stubble", which is still present 2-3 years after vegetation die-off, inhibits sand transport. This period of stability may provide time for the natural re-establishment (or re-introduction) of indigenous species before blowouts or other mobile dunes form.



Donna's work is funded by the Department of Conservation. The study sites are located on the remote southwest coast of Rakiura National Park on Stewart Island, which is not an easy environment to work in. Access to the beaches of this part of the Park is by light plane, southwest gales are frequent and Donna has to navigate "quicksand" to cross the Doughboy River. The NZCS management committee congratulates Donna on her award and wishes her well for the future.

Applications for the next award close on the 30 June 2003. Students should check the NZCS website for details.

Coastal
News



Reconstruction of the Wahine Storm by computer modelling

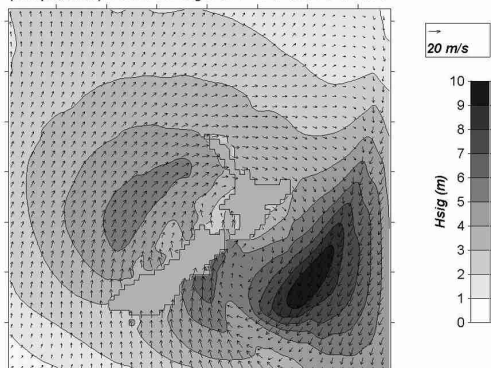
We like to think that our ability to anticipate the effects of severe weather in coastal waters has come a long way over recent decades, with improvements in data availability and modelling tools. But how well will modern forecasting practices perform when it really matters, in the face of a truly life-threatening weather event?

A notorious example was Cyclone Gisele, a regenerating tropical cyclone that passed over the North Island from 9 to 10 April 1968. This was more widely known as the Wahine storm, after the Inter-island ferry TEV Wahine that sank off Wellington Heads with the tragic loss of 54 lives. As a way of testing the forecasting skill of modern wind and wave models, NIWA has reconstructed the Wahine storm using a computer model to simulate winds and pressures at high resolution (as small as 10 km) based on a re-analysed NCEP global wind model. Then the regional winds were used to drive a wave model to obtain a picture of

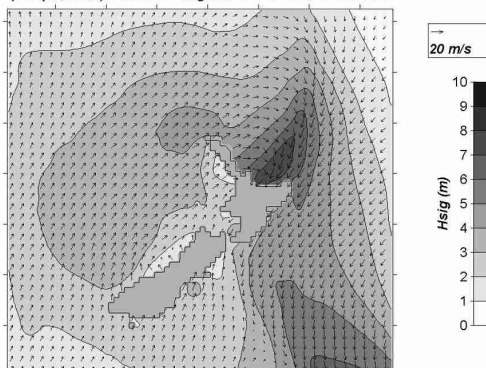
what the deep-water wave heights may have been along the east coast of the North Island. The results were compared with historical records of pressures, winds and waves collected from meteorological stations and observers in ships and lighthouses. Simulated wave heights of up to 8 m, similar to the contemporary observations, were produced by onshore winds on the east coast as the storm tracked south. The onset of the high waves near Wellington that caused Wahine to founder was found to be sensitive to the timing and location of the storm centre passing over the Wairarapa coast. The study also highlighted the need for high resolution regional models in representing such compact storm systems, as wave heights were significantly underpredicted in low-resolution (>100 km) simulations.

By Richard Gorman, NIWA (r.gorman@niwa.co.nz)
& Mike Revell, NIWA (m.revell@niwa.co.nz)

(Wispd,Widir) vector & Height at t = 10/ 4/1968 10: 0



(Wispd,Widir) vector & Height at t = 9/ 4/1968 18: 0



"Example of computer model reconstruction of wind patterns from Wahine Storm
- for a colour version, see www.coastalsociety.org.nz or www.niwa.co.nz/rc/prog/chaz/news/winds



Editorial

Welcome to the 21st issue of *Coastal News* and to this year's issue dedicated to the NZ Coastal Society's 2002 Conference, which was hosted by Environment Waikato on the fabulous Coromandel Peninsula.

The annual conference provides a fantastic opportunity for learning and sharing ideas and experiences on coastal science, engineering and management for both Society members and non-members. The venue at Pauanui was certainly appropriate in the face of the increasing pressures and conflicts that are being experienced on the Coromandel Peninsula that are similar to those throughout the country. The inclusion of presentations on marine farming and aquaculture provided an opportunity to discuss a very topical national issue and the presentations on coastal 'values' and environmental economics stimulated some interesting debate. A big thank-you to the organisers of the conference and the speakers

who donated their valuable time to give excellent presentations and provided much food for thought.

As a result of the strategic plan, which has been developed for *Coastal News* to ensure the high quality is consistently maintained, Terry Hume has now been able to pass on the role of Editor to myself and Mike Hilton has taken on the role of Associate Editor. Our major goal is to continue to make better use of *Coastal News* as a tool for keeping communication in the society going throughout the year and to ensure this is a top quality production for the members.

We do rely heavily on assistance from the society members to provide us with up-to-date information on work they are involved with and sincerely appreciate those who put their hands up to write the brief and thought provoking articles which now make up the *Coastal News*.

Lucy Brake, Editor (Beca)

Natural Hazards Centre (NIWA & GNS): A New Focus on Hazards

What do earthquakes and landslides, storms and floods, volcanic eruptions, wildfires, coastal erosion and tsunamis have in common? The answer lies in the newly established Natural Hazards Centre, which will bring all the natural hazards New Zealand faces under a single banner.

The Centre is a joint initiative of the Institute of Geological and Nuclear Sciences (GNS) and the National Institute of Water and Atmospheric Research (NIWA).

"The aim is to provide planners and hazard managers with a 'first port of call' for scientific information and services on any of the wide range of natural hazards New Zealand communities face", said joint coordinator Dr Robin Falconer of GNS.

"That means that if you want to know the earthquake risks that a new bridge might be exposed to, or the risks to a proposed subdivision from a nearby river bursting its banks, the Centre will help identify them."

GNS and NIWA are well placed to take a central role in providing such information because their research and consulting services cover the natural hazards threatening New Zealand, they have national monitoring networks and databases, have a national focus, complement each other's activities, and are seen as leaders in their fields.

"The whole focus is to make New Zealand a more resilient society", said Dr Rob Murdoch, NIWA's Research Director. "As scientists, we want to improve the communication of our findings to the people making decisions, and we want to hear from them where they want us to focus our research efforts."

"The Centre is not about GNS and NIWA alone.

We aim to bring together expertise from a wide range of different bodies, including the Ministry of Civil Defence and Emergency Management, the Earthquake Commission, the Maritime Safety Authority, the Ministry for the Environment, the Insurance Council, Regional and District Councils, weather forecasters, emergency services, utilities, and tangata whenua as well as researchers from universities, other CRIs, and research associations", said Dr Murdoch.

The Centre will develop a full communications strategy that will include a regular quarterly newsletter, public talks, workshops, media releases, hazard planning tools and a one-stop-shop web site (www.naturalhazards.net.nz/).

Of interest to the coastal sector, the first newsletter (due out early in November), has a focus on tsunami. Also, GNS and NIWA are jointly coordinating a series of community perception surveys on coastal hazards across NZ over the summer.

For more information please contact Murray Poulter (m.poulter@niwa.co.nz) or Mike Kozuch (m.kozuch@gns.cri.nz).

A Thought from the Management Committee

"A leader is best when people barely know he exists, not so good when people obey and acclaim him, worse when people barely know he exists, not so good when people obey and acclaim him, worse when they despise him ... but of a good leader who talks little. When his work is done, his aim fulfilled, they will say 'we did it ourselves'".

by Mike Hilton

NZ Coastal Society — New Project Proposal

Guidelines for Sustainable Management of the NZ Coastline

Proper coastal management requires a multi-disciplinary approach. The skills required may include: planning, law, geomorphology, biology, geology, engineering, oceanography and meteorology. Most practitioners involved in the coastal zone tend to have a specialised knowledge in just one or two of these areas and, sometimes, little appreciation of the complex nature of many coastal problems. They may also be ill-equipped to deal with cultural, social and economic issues that can arise. It is not surprising that there is often a lack of consistency in coastal management decision-making in New Zealand.

At present there is no one resource available that offers a comprehensive review of coastal management problem-solving in New Zealand in a form that assists practitioners to balance the often competing and conflicting demands of coastal resource use, hazard mitigation, economic development and conservation.

NZCS initially proposed to provide such a resource as a single project two years ago. Excellent council support was received for the concept and an application for funding was made to the Sustainable Management Fund in November 2000. This, however, was a large project and it did not rank highly enough within SMF's priorities to receive funding at the time.

It has now been decided to break the project down into a series of, more manageable 'books', to be

completed over the next several years. A preliminary list of titles includes:

- Introduction to Sustainable Coastal Management
- Understanding the Coastal Environment
- Managing Development in the Coastal Zone
- The Treaty of Waitangi and Coastal Zone Management
- Managing Water Quality in the Coastal Zone
- Managing Coastal Hazards.

It is intended that, when completed, this project will provide best practice guidelines that identify, explain and promote strategies for sustainable management in a manner that is consistent with the maintenance of the physical, cultural and ecological integrity of the NZ coastline.

The proposed guidelines will provide planners, scientists, consultants, engineers, environmentalists, academics and lay people with tools to enable them to make informed and consistent decisions about coastal issues.

Further details of the project will soon be available on the society's website (coastalsociety.org.nz) and feedback from members is to be actively sought. In the meantime, please send any comments to: j.lumsden@cae.canterbury.ac.nz.

John Lumsden

**Coastal
News**





NIWA
Taihoro Nukurangi

Coastal and Marine research & consultancy

We offer:

- numerical modelling of water and sediment dynamics wave, currents
- tide data collection and analysis
- bathymetry, side-scan sonar, sub-bottom seismic surveys
- sediment sampling and analysis
- beach profile monitoring, Cam-Era technology
- water quality measurements, ecotoxicology
- benthic ecology surveys

Examples:

NIWA's state-of-the-art equipment, numerical models, and analysis skills have been applied to:

- sand resource surveys
- coastal erosion and hazard assessment
- pipeline and cable surveys
- waste discharge outfall design and monitoring
- port deepening and ship motion studies
- tidal predictions and forecasting
- Ocean wave climate predictions
- Assessment of environmental effects
- design and implementation of monitoring programmes
- studies of climate change effects

For more information, contact:
Terry Hume, phone 0-7-856 1729, fax 0-7-856 0151
Email t.hume@niwa.co.nz



Visit our web site at:
www.niwa.co.nz

News from the Universities

People:

Patrick Hesp has accepted a professorial post in Geography and Anthropology at Louisiana State University, Baton Rouge, USA and will depart NZ in January 2003.

Kevin Parnell has accepted the position of associate professor in the School of Tropical Environmental Studies and Geography, at James Cook University, Townsville.

New Research Projects:

Mike Shepherd (Massey University) and Bruce McFadgen (DoC) have resumed their studies at Matakana Island, Bay of Plenty, and most recently have been investigating the evidence for a tsunami impact (M.Shepherd@massey.ac.nz).

Martin Single (University of Canterbury) is involved in an international study of the management of high speed craft (chaired by LtCdr Alan Blume, US Coastguard) and is working with Kat Bunting on the Port Otago Dredge Sediment Dispersal Study (m.single@geog.canterbury.ac.nz).

Patrick Hesp is finishing a study examining the relationships between ENSO phenomena and parabolic dune movement, with particular focus on the relationships between El Nino events, strong winds and dune movement (P.A.Hesp@massey.ac.nz).

Scott Nichol, Kevin Parnell and Paul Kench are collaborating with Roger McLean and Rob Brander (UNSW) on a Marsden-funded project to investigate 'process controls on atoll island morphology in the Maldives'. The project is documenting reef platform processes and changes in island morphology in response to predictable shifts in monsoon winds.

Mike Hilton is working with Nick Harvey of

Adelaide University on the impact of exotic plant species on indigenous flora and the long-term development of transgressive dune systems (mjh@geography.otago.ac.nz).

Post-graduate Research nearing Completion:

Suzanne Boorer (MSc, Canterbury) - Coastal Geomorphology of South Bay, Kaikoura (with Martin Single).

Sarah McDonald (MSc, Auckland) - Measurement and Prediction of High-Speed Vessel Wake Wash Propagation along Grove Arm, Marlborough Sounds (with Kevin Parnell).

Angela Burke (MSc, Auckland) - Aspects of vessel wake induced sediment transport in the Marlborough Sounds (with Kevin Parnell).

Anna Taylor (PhD, Canterbury) - An investigation of processes on Shore Platforms, NZ (with Martin Single).

Jeff Page (MSc, Massey) - Parabolic dune migration and geomorphology at Three Mile Creek, near Himatangi (with Patrick Hesp).

Richard Poole (MSc., Massey) - Methods for valuing coastal dunes in the Manawatu region for various purposes (farming, forestry, recreation and conservation) (with Patrick Hesp).

Donna Woodley (MSc, Otago) - Processes of dune development and indigenous species recovery following marram grass eradication (with Mike Hilton).

Pip Watt (MSc, Otago) - Drought-related blowout development, Tahakopa, Otago (with Mike Hilton).

Jo Walton (Plan, Otago) - Integrated community-based coastal management in New Zealand (with Mike Hilton).

Coastal News



NZCS Management Committee

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Ken Murray	Department of Conservation (KMurray@doc.govt.nz)
Matthew Patterson	Auckland City Council (PatersoM@akcity.govt.nz)

Correspondence to Paul Baunton (paulb@tauranga.govt.nz)

Website queries to Charles Hendtlass (c.hendtlass@cae.canterbury.ac.nz)

Conferences/Workshops

Coastal Dune Vegetation Network
12-15 February 2003, Dunedin Museum, Dunedin

The next in a series of successful CDVN meetings concerned with the restoration and management of dune vegetation. The programme includes plenary and technical presentations, the CDVN AGM and short and long fieldtrips to the fabulous Otago coast. See website for more information (www.forestresearch.co.nz) or email dblairst@xtra.co.nz.

Symposia on Coastal Processes and Storm Surge,
2003 IUGG General Assembly
30 June – 11 July 2003, Sapporo, Japan

There will also be other symposia of interest ranging from air-sea to groundwater-seawater interaction. The full listing is at their Website along with the 2nd circular, call for papers, details on requirements for abstract submissions, etc. For more information go to www.iugg.org and then click on 2003 IUGG General Assembly.

New Zealand Geographical Society 22nd
Conference (with Geog Ed2003)
6-11 July 2003, Auckland, New Zealand

The Conference Committee see as a principal purpose of the Conference the establishment of links between geographers working and studying locally, nationally and internationally. The theme, 'Windows on a Changing World', reflects the selected inclusive scientific, policy, planning and Geographical Education programme and is expected to be of high interest to those from New Zealand and overseas. Check out the website: www.geog.auckland.ac.nz/nzgs2003/

Coastal Zone '03
13-17 July 2003, Baltimore, Maryland, USA

This is being labelled as the largest conference for the world's coastal resource management community, with the theme for this conference being 'Coastal Zone Management Through Time'.

For more information go to
www.csc.noaa.gov/cz2003/

Coastal Structures Conference
26-29 August 2003, Portland, Oregon, USA

CSC 2003 is focused on continuing the traditions and advance innovation in coastal structures and beach preservation. This Conference is the fourth in a series of conferences that highlight the significant advancements in coastal structure innovation, design, and construction.

The Proceedings for the previous three conferences have yielded milestone works and are frequently cited references in the field. More information can be found at the web site: www.asce.org/conferences/coastal2003/

HYDRO 2003: The 4th Australasian
Hydrographic Symposium
24-26 November 2003 Christchurch, New Zealand

These symposia are held every 6 years and they address the Australian, New Zealand and Pacific market in hydrographic survey, coastal and offshore oceanography. You may just be in time to catch the symposium so for more information go to:
www.hydrographicsociety.org.nz/conference.htm

Instructions for authors

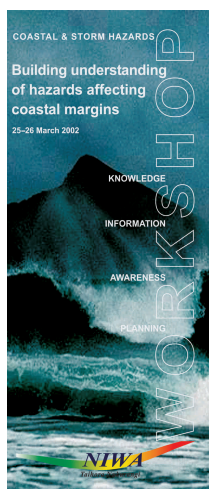
Your contributions to *Coastal News* keep Society members and the coastal community informed about coastal issues.

Contributions can be advertisements for conferences or workshops, short news items or longer articles. We prefer articles of a maximum of 400 words (about 1-page in the newsletter), preferably with pictures or diagrams. Submit articles to Mike Hilton, Associate Editor
(e-mail: mjh@geography.otago.ac.nz).

Test your Coastal Knowledge - Answer

Tairua in the 1960s; compare this with the cover photograph taken in 2002 (page 1).

Coastal
News



Coastal & Storm Hazards Workshop proceedings now available on the web

The proceedings of the Coastal and Storm Hazards Workshop are now available via the NIWA website and the Physical Hazards programme page www.niwa.co.nz/rc/prog/chaz/. The document itself is at www.niwa.co.nz/rc/prog/chaz/news/2002-03-25.pdf

The Coastal and Storm Hazards Workshop, held in Hamilton on 25-26 March 2002, was organised and partially funded by NIWA, with support from the Foundation for Research Science and Technology. The proceedings form an important document that summarises the state of the knowledge base and end-user needs and requirements for research tools and services.

We are grateful to all the presenters and their organisations for their contributions and to Jim Dahm who facilitated proceedings.

Rob Bell & Terry Hume (NIWA), Workshop Convenors

Conference Gallery...

